

PATENT  
Appeal Brief Under  
37 CFR 1.192

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5/4/04

5 IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: KFOURY ET AL. )  
 )  
 ) Examiner J. Chiang  
Appl. No. 09/941,521 )  
 )  
 ) Art Unit 2642  
10 Confirm. No. 7363 )  
 )  
 ) Atty. Docket No. CS10289  
Filed: 29 August 2001 )

15 Title: "Electronic Device With Rotatable Keypad And Display"

**APPEAL BRIEF UNDER 37 C.F.R. § 1.192**

20

Assistant Commissioner for Patents  
Alexandria, Virginia 22313

Sir:

25

**Real Party In Interest**

30

The real party in interest is Motorola Inc., by virtue of an  
assignment duly executed by the named inventor(s) and recorded in the Patent  
Office on 29 August 2001, REEL/FRAME 012141/0856.

**Related Appeals and Interferences**

05/05/2004 MARMICH 00000001 502117 08941521

02 FC:1402

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00000001 0A

There are no related appeals or interferences.

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### Status of Claims

Claims 1-28 are pending, finally rejected, and the subject of the instant appeal.

5 A copy of the appealed claims is appended.

### Status of Amendments

10 No claim amendments have been submitted subsequent to the mailing of the final Office Action on 5 March 2004.

### Summary of Disclosure

15 In one embodiment of the disclosure, a portable electronic device, for example a cellular telephone handset, includes a keypad pivotally disposed on a housing, wherein the keypad is pivotally positionable between first and second positions. A display of the device has a first display configuration when the keypad is in the first position, and the display has a second display configuration when the keypad is in the second position. In some  
20 embodiments, a sensor provides a sensor signal representative of an orientation of the keypad relative to the electronic device to a processor that modifies display drivers for forming display images on the display with an orientation that is a function of the orientation of the keypad.

25 In another embodiment, the disclosure is drawn generally to methods of orienting a character input area and a display image of an electronic device, including sensing an orientation of an input area relative to a housing of the electronic device, and configuring a display image orientation

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on a display of the electronic device relative to the housing as a function of the orientation of the input area. In another embodiment, keys are remapped, for example, based on a look-up table, relative to key sensors.

5 In one possible configuration of the portable electronic device, the keypad is disposed on an upper portion of the device housing, and the display is disposed on a lower portion of the device housing.

These and other aspects and features of the disclosure are discussed more fully on page 1, line 9 – page 16, line 18 in the original specification and illustrated in original FIGS. 1-16.

#### Issues for Consideration on Appeal

1. Whether Claims 1-8, 10, 14-28 are anticipated by US Patent No. 6,593,914 (Nuovo et al.) under 35 USC 102(e).

15 2. Whether Claim 9 is patentable over Nuovo et al. in view of US Patent No. 6,349,221 (Wolf) under 35 USC 103(a).

3. Whether Claims 11-12 are patentable over Nuovo et al. in view of US Patent No. 4,267,409 (Baldoni) under 35 USC 103(a).

#### Grouping of Claims

The Claims do not stand or fall together regarding the rejections thereof. The bases for the patentability of the claims is discussed further below.

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## Discussion of Issue 1

### Rejection Summary

5                    Claims 1-8, 10, 14-28 stand finally rejected under 35 USC 102(e) as anticipated by US Patent No. 6,593,914 (Nuovo et al.) Office Action, 3 March 2004, para. 2.

### Patentability Discussion

10

In Applicants' communication dated 8 April 2004, in response to the final Office Action of 3 March 2004, the Applicants submitted an Affidavit or Declaration under 37 CFR 1.131 swearing back of the Nuovo et al. reference, which supports the rejection under 35 USC 102(e).

15

It is noted that the subject Affidavit was submitted in response to a final rejection because the Examiner's first office action was made final.

20

In the Advisory Action mailed on 22 April 2004, the Examiner indicated curiously that the "remarks" of the 8 April 2004 communication would "not be entered" upon filing an appeal. However, the Examiner has not objected to the form or substance of the Affidavit. The Affidavit is of record and must be entered as it was timely submitted and has not been the subject of an objection.

25

In light of the Affidavit and supporting evidence swearing back of the Nuovo et al. reference, the rejections based upon Nuovo et al. under 35 USC 102(e) are improper and must be withdrawn.

Claims 1-8, 10, 14-28 are thus patentably distinguished over Nuovo et al.

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## Discussion of Issue 2

### Rejection Summary

5                    Claim 9 stands finally rejected under 35 USC 103(a) as being unpatentable over Nuovo et al. in view of US Patent No. 6,349,221 (Wolf). Office Action, 3 March 2004, para. 4. The Examiner relies upon Wolf as a secondary reference for its alleged teaching of a touchscreen display. Id.

### 10            Patentability Discussion

                  In Applicants' communication dated 8 April 2004, in response to the final Office Action of 3 March 2004, the Applicants submitted an Affidavit or Declaration under 37 CFR 1.131 swearing back of the Nuovo et al. reference,  
15                    which supports the subject rejection under 35 USC 103(a).

                  It is noted that the subject Affidavit was submitted in response to a final rejection because the Examiner's first office action was made final.

                  In the Advisory Action mailed on 22 April 2004, the Examiner indicated curiously that the "remarks" of the 8 April 2004 communication  
20                    would "not be entered" upon filing an appeal. However, the Examiner has not objected to the form or substance of the Affidavit.

                  In light of the Affidavit and supporting evidence swearing back of the Nuovo et al. reference, the rejection based upon Nuovo et al. under 35 USC 103(a) is improper and must be withdrawn. Wolf does not disclose or suggest  
25                    the limitations that Nuovo et al. is purported to disclose or suggest.

                  Claim 9 is thus patentably distinguished over Nuovo et al. and Wolf.

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### Discussion of Issue 3

#### Rejection Summary

5                    Claims 11-12 stand finally rejected under 35 USC 103(a) as being  
unpatentable over Nuovo et al. in view of US Patent No. 4,267,409 (Baldoni).  
Office Action, 3 March 2004, para. 5. The Examiner relies upon Baldoni as a  
secondary reference for its alleged teaching of various keypad features  
including projections, notches, and tabs and slots. Id.

#### Patentability Discussion

10                    In Applicants' communication dated 8 April 2004, in response to  
the final Office Action of 3 March 2004, the Applicants submitted an Affidavit  
15 or Declaration under 37 CFR 1.131 swearing back of the Nuovo et al. reference,  
which supports the subject rejection under 35 USC 103(a).

It is noted that the subject Affidavit was submitted in response to  
a final rejection because the Examiner's first office action was made final.

20                    In light of the Affidavit and supporting evidence swearing back of  
the Nuovo et al. reference, the rejection based upon Nuovo et al. under 35 USC  
103(a) is improper and must be withdrawn. Baldoni does not disclose or  
suggest the limitations that Nuovo et al. is purported to disclose or suggest.

Claims 11-12 are thus patentably distinguished over Nuovo et al.  
and Baldoni.

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**Prayer for Relief**

Kindly reverse and vacate the rejection of Claims in view of the  
discussion above, with instructions for the Examiner to allow said Claims to  
5 issue in a United States Patent without further delay.

Respectfully submitted,



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APPENDIX  
CLAIMS PENDING ON APPEAL

- 5                   1. (Original) A method of orienting a character input area and a display image for an electronic device, comprising:
- sensing an orientation of an input area relative to a housing of the electronic device; and
- configuring a display image orientation on a display of the electronic device relative to the housing as a function of the orientation of the input area.
- 10
2. (Original) The method of claim 1, sensing the orientation of the input area includes at least one of sensing the orientation through input from a GUI interface, through a dome sheet array, a fixed key and a sensor.
- 15
3. (Original) The method according to claim 1, sensing an orientation of an input area by determining the orientation of a physically rotatable input area, configuring the display image orientation by electronically rotating the display image orientation.
- 20
4. (Original) The method according to claim 1, sensing an orientation of an input area by sensing the orientation of a keypad.
- 25
5. (Original) The method according to claim 4, remapping keys based on a look-up table relative to key sensors.



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6. (Original) The method according to claim 1, modifying image forming display drivers in the electronic device in response to sensing the orientation of the input area.

5                   7. (Original) A portable electronic device having a housing, comprising:

an input area disposed on the housing;

a display having a display image disposed on the housing;

10                   a sensor for providing a sensor signal representative of an orientation of the input area relative to the housing; and

a display system for changing, in response to the sensor signal, an orientation of the display image on the display relative to the orientation of the input area and as a function of the orientation of the input area.

15                   8. (Original) The device of claim 7, the character input area is rotatable; the display image is electronically rotatable.

20                   9. (Original) The device of claim 7, the character input area includes a touchscreen and wherein keys are visually rotatable.

10. (Original) The device of claim 7, the input area is a keypad.

25                   11. (Original) The device of claim 7, the input area includes a rotatable keypad assembly having a keypad support, a keypad disc and a keypad membrane disposed between the keypad support and the keypad disc.

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12. (Original) The device of claim 11, the keypad support includes a plurality of projections, the keypad membrane includes corresponding notches and the keypad disc includes a plurality of tabs corresponding to the notches and plurality of projections.

5

13. (Original) The device of claim 12, each of the plurality of tabs includes a slot to receive a keypad support projection, and a seat surface rotatably engageable with a surface of a cover of the device.

10

14. (Original) The device of claim 7, the input area has at least first, second and possibly third orientations, the second orientation rotationally substantially 90 degrees counterclockwise from the first orientation, and the third orientation rotationally substantially 90 degrees clockwise from the first orientation.

15

15. (Original) The device of claim 14, the character input area has a fourth orientation rotationally substantially 180 degrees from the first orientation.

20

16. (Original) The device of claim 7, the electronic device further comprises at least one lookup table for remapping the keys relative to the key sensors.

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17. (Original) The device according to claim 8, the electronic device further comprises display drivers for forming the display image on the display, and a processor for receiving the sensor signal and in response thereto modifying the display drivers in the electronic device for forming the display

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image on the display as a function of the orientation of the character input area.

5                   18. (Original) A portable electronic device, comprising:  
                  a physically rotatable keypad;  
                  a display having a display image;  
                  a sensor for providing a sensor signal representative of an  
orientation of the keypad relative to the electronic device;  
                  display drivers for forming the display image on the display; and  
10                  a processor for receiving the sensor signal and in response thereto  
modifying the display drivers for forming the display image on the display  
with an orientation that is a function of the orientation of the keypad.

15                  19. (Original) The device of claim 18, the keypad has a plurality of  
keys held in a key housing, and a plurality of key sensors that sense activation  
of the keys, the key sensors located on a sensor housing.

20                  20. (Original) The device of claim 19, the key sensors are one of  
resistive sensors, capacitive sensors, and bubble switches.

25                  21. (Original) The device of claim 18, the keypad has at least first,  
second and possibly third orientations, the second orientation rotationally  
substantially 90 degrees counterclockwise from the first orientation and the  
third orientation rotationally substantially 90 degrees clockwise from the first  
orientation.

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22. (Original) The device of claim 21, the keypad has a fourth orientation rotationally substantially 180 degrees from the first orientation.

5 23. (Original) The device of claim 18, wherein the electronic device further comprises at least one lookup table for remapping the keys relative to the key sensors.

10 24. (Original) A portable electronic device, comprising:  
a housing;  
a keypad pivotally disposed on the housing, the keypad pivotally positionable between at least first and second positions;  
a display disposed on the housing;  
the display having a first display configuration when the keypad is in the first position,  
15 the display having a second display configuration when the keypad is in the second position.

20 25. (Original) The device of Claim 24, the keypad is pivoted a first angle between the first and second positions, the first display configuration pivoted a second angle relative to the second display configuration, the first angle the same as the second angle.

25 26. (Previously Presented) A portable electronic device, comprising:  
a housing having an upper portion and a lower portion;  
a keypad disposed on the housing;

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a display disposed on the housing;  
the display nearer the lower portion of the housing than the  
keypad, the keypad nearer the upper portion of the housing than display.

5                   27. (Previously Presented) The portable electronic device of Claim  
26,

the keypad is rotatably coupled to a side of the housing, the  
keypad rotatably positionable in at least two positions separated by an angle of  
approximately 90 degrees,

10                   the keypad remaining on the same side of the housing when in the  
at least two positions.

28. (Previously Presented) The portable electronic device of Claim  
27,

15                   a keypad position detecting sensor,  
information on the display oriented based on keypad position  
detected by the keypad position detecting sensor.